

1/26/01
26. (New) The method of claim 25, wherein the bit rate control operation request is transmitted to the selected remote end device after determining that no resources are available to dynamically allocate to media manipulation.

COMMENTS

Claims 1-16 previously were pending. Claims 1 and 11 are independent claims; claims 2-10 and 12-16 depend from claims 1 and 11, respectively. New independent claim 17 and claims 18-26, which depend from claim 17, have been added.

I. Claims 1-16

In the prior application (U.S. Serial No. 08/978,795, filed November 26, 1997), the Examiner had rejected claims 1-16 under 35 U.S.C. § 103(a) over Shaffer (U.S. 5,673,253) in view of Downs (U.S. 5,689,800). In particular, the Examiner had indicated that:

... Shaffer teaches that certain classes of service may be requested, and that the system determines if the QOS meets that threshold (col. 3, lines 18-28; col. 4, lines 5-12). When QOS goes below a certain threshold, the system is enabled to reallocate bandwidth resources in order to insure that the QOS at least meets a certain threshold, at least for the users with a higher priority, see Fig. 3. Even though Shaffer discusses that, for instance, an officer of a corporation may be assigned a higher class of service than other employees (col. 7, lines 21-30), the reference does not explicitly show a particular user making a QOS demand. However, Downs provides such a teaching, wherein particular users make QOS or class-of service demands in a telecommunications network, at least by changing the window size of the video signal (col. 6, lines 20-67). ...

Shaffer is concerned with maintaining the availability of a telecommunications network. In particular, Shaffer's scheme for dynamically reallocating the resources of a network node is designed to reduce the likelihood that the resources of the network node will reach a point of exhaustion (i.e., a blocking condition in which additional telecommunications sessions are blocked until at least one of the previously established sessions is released). In accordance with Shaffer's approach, the bandwidth of one or more established sessions is reduced automatically when resource availability falls below a predetermined threshold level. According to Shaffer,

"[t]he reallocation is designed to ensure free channels for subsequent telecommunications sessions" (col. 3, lines 28-29). Shaffer's approach also allows a hierarchy of classes of service to be defined in order to protect those sessions that cannot tolerate reduced quality of service (see, e.g., col. 3, lines 65-67).

Shaffer, however, does not teach or suggest asserting dynamic control over the operating system of an end device to increase resources allocated to media manipulation to improve the quality of service provided when the quality of service provided is less than the quality of service demanded, as recited in independent claims 1 and 11. Indeed, Shaffer does not even hint at increasing the allocation of resources of an end device to media manipulation. Shaffer merely changes the number of channels that are allocated by the network to multimedia sessions in response to high load conditions. Shaffer's disclosure teaches nothing about the allocation of processing resources at any of the user units 18-22 (see FIG. 1 of Shaffer).

Downs also fails to teach or suggest anything about changing the allocation of end device resources to media manipulation. Downs describes a video processing system in which a decoding system 200 of a destination device transmits to an encoding system 100 of a source device new parameters affecting the display of video data in a window 204a of the destination device. In this way, the encoding system 100 may determine how to most efficiently encode the video data and, thereby avoid encoding, decoding and transmission of unnecessary video data. Downs teaches that the encoding system 100 and the decoding system 200 may be general microprocessor-based personal computer systems (see, e.g., col. 4, lines 23-25 and col. 5, lines 4-7). Downs, however, does not teach or suggest anything about reallocating the resources of the encoding system 100 or the decoding system 200 – or any end device, for that matter – to media manipulation.

Accordingly, since neither Shaffer nor Downs teaches or suggests an element required by each of independent claims 1 and 11, the Examiner's § 103(a) rejection of these claims should be withdrawn. Dependent claims 2-10 and 12-16 incorporate the features of independent claims 1 and 11 and, therefore, are patentable for at least the same reasons.

II. New Claims 17-26

As explained in detail below, neither Shaffer nor Downs teaches or suggests the invention recited in new claims 17-26.

Each of the new claims 17-26 requires the steps of: determining whether a quality of service for one or more of the multimedia streams received at an end device is less than a user-specified quality of service; and after determining that a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service, transmitting to a selected remote end device a request for a bit rate control operation to be performed at the selected remote end device.

Shaffer merely changes the number of channels that are allocated by the network to multimedia sessions in response to high load conditions. Shaffer's disclosure teaches nothing about the transmission of bit rate control operation requests from one user unit 18-22 to another.

Downs, on the other hand, is not concerned with whether or not the quality of service for a multimedia stream drops below the quality of service demanded by a user of an end device. Indeed, throughout his disclosure Downs implicitly assumes that source device always is able to meet whatever video display parameters are demanded by the destination device. Thus, there is no need for Downs' system to perform the step of determining whether a quality of service for one or more of the multimedia streams received at an end device is less than a user-specified quality of service, as required by each of the new claims 17-26.

III. Conclusion

The claims are patentable for at least the reasons given above and now should be allowed.

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Respectfully submitted,

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